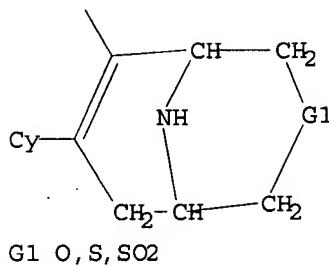


## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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L2	645	(514/224.2,230.5).ccls.	USPAT	OR	OFF	2007/07/18 17:20
L3	1131	I1 I2	USPAT	OR	OFF	2007/07/18 17:20
L4	107068	RAS\$	USPAT	OR	OFF	2007/07/18 17:20
L5	56	I3 and I4	USPAT	OR	OFF	2007/07/18 17:21

G1 O, S, SO<sub>2</sub>

Structure attributes must be viewed using STN Express query preparation.

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 SAMPLE SCREEN SEARCH COMPLETED - 446 TO ITERATE

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 SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
 BATCH \*\*COMPLETE\*\*  
 PROJECTED ITERATIONS: 7653 TO 10187  
 PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

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 FULL SCREEN SEARCH COMPLETED - 8299 TO ITERATE

100.0% PROCESSED 8299 ITERATIONS 8 ANSWERS  
 SEARCH TIME: 00.00.01

L3 8 SEA SSS FUL L1

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10/554,702      Page 5

FILE COVERS 1907 - 18 Jul 2007 VOL 147 ISS 4  
FILE LAST UPDATED: 17 Jul 2007 (20070717/ED)

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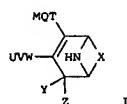
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L4                    2 L3

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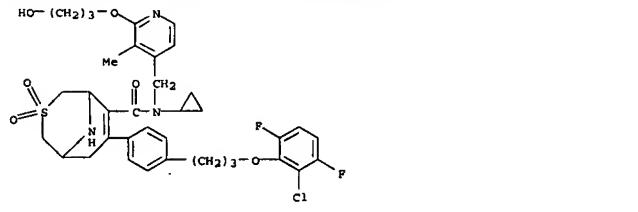
L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2005:395318 CAPLUS  
 DOCUMENT NUMBER: 142:463606  
 TITLE: Preparation of azabicycloalkenes as renin inhibitors  
 INVENTOR(S): Bezencen, Olivier; Sifferlen, Thierry; Bur, Daniel; Fischli, Walter; Weller, Thomas; Remen, Lubos; Richard-Bildstein, Sylvia  
 PATENT ASSIGNEE(S): Actelion Pharmaceuticals Ltd. Switz.  
 SOURCE: PCT Int. Appl. 50 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005040173	A1	20050506	WO 2004-EP11704	20041018
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, RW: BW, GH, GM, KE, LS, MM, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CP, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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CA 2540817	A1	20050506	CA 2004-2540817	20041018
EP 1680427	A1	20060719	EP 2004-765982	20041018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1930170	A	20070314	CN 2004-80030679	20041018
JP 2007509099	T	20070412	JP 2006-536020	20041018
US 2007135405	A1	20070614	US 2006-576904	20060421
IN 2006CN01802	A	20070706	IN 2006-CN1802	20060523
PRIORITY APPLN. INFO.:			WO 2003-EP311740	A 20031023
			WO 2004-EP11704	W 20041018

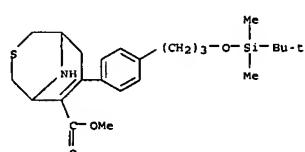
OTHER SOURCE(S): MARPAT 142:463606  
 G1



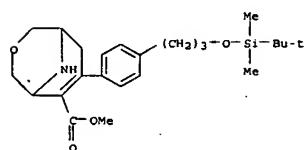
L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



IT 851377-84-9P 851377-85-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of azabicycloalkenes as renin inhibitors)  
 RN 851377-84-9 CAPLUS  
 CN 3-Thia-9-azabicyclo[3.3.1]non-6-ene-6-carboxylic acid, 7-[4-[(3-[(1,1-dimethylethyl)dimethylsilyl]oxy)propyl]phenyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 851377-85-0 CAPLUS  
 CN 3-Oxa-9-azabicyclo[3.3.1]non-6-ene-6-carboxylic acid, 7-[4-[(3-[(1,1-dimethylethyl)dimethylsilyl]oxy)propyl]phenyl]-, methyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR  
 Habte

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

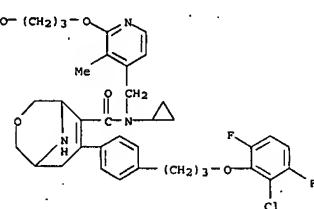
AB Title compds. [I; Y, Z = H, F, Me; YZ = atoms to form a cyclopropyl ring; X = CH2CH2CH2, CH2CH2, CH2OCH2, CH2SOCH2, CONLCHRE; W = Ph, heteroaryl; V = bond, (CH2)r, A(CH2)s, OCHMeCH2O, etc.; A = O, S, SO, SO2; U = aryl, heteroaryl; T = CONR1, (CH2)pO2C, CO2, etc.; Q = alkylene, alkenylene; M = Aro(CH2)rV5, ArOCH2CH2O(CH2)rW5; Ar = aryl, heteroaryl; K = H, CH2OR3, CH2NR2R3, etc.; L = R3, COR3, CO2R3, CONR2R3, SO2R3, SO2NR2R3; R1 = H, alkyl, alkenyl, alkynyl, cycloalkyl, aryl, cycloalkylalkyl; R2 = H, alkyl, alkenyl, cycloalkyl, cycloalkylalkyl, aryl, heteroaryl, heterocyclyl, etc.; R5 = OH, O2CR2, CO2R, cyano, SO3H, morpholinocarbonyl, etc.; R6 = H, (substituted) alkyl, alkoxy; p = 1-4; r = 1-6; v = 2-4; w = 1, 2], were prepared. Thus,

rac-(1R\*,5S\*)-3-(4-(2,6-dichloro-4-methylphenoxy)ethoxyphenyl)-8-azabicyclo[3.2.1]oct-2-ene-2-carboxylic acid cyclopropyl[2-(3-hydroxypropoxy)-3-methylpyridin-4-ylmethyl]amide (multistep preparation given) inhibited human recombinant renin with IC50 = 0.18 nM.

IT 790697-25-5 790697-26-6P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (claimed compound; preparation of azabicycloalkenes as renin inhibitor)

RN 790697-25-5 CAPLUS

CN 3-Oxa-9-azabicyclo[3.3.1]non-6-ene-6-carboxamide, 7-[4-[(3-(2-chloro-3,6-difluorophenoxy)propyl)phenyl]-N-cyclopropyl-N-[(2-(3-hydroxypropoxy)-3-methyl-4-pyridinyl)methyl]- (9CI) (CA INDEX NAME)



RN 790697-26-6 CAPLUS  
 CN 3-Thia-9-azabicyclo[3.3.1]non-6-ene-6-carboxamide, 7-[4-[(3-(2-chloro-3,6-difluorophenoxy)propyl)phenyl]-N-cyclopropyl-N-[(2-(3-hydroxypropoxy)-3-methyl-4-pyridinyl)methyl]-, 3,3-dioxide (9CI) (CA INDEX NAME)

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

07/18/2007

Own work

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:965123 CAPLUS

DOCUMENT NUMBER: 141:410817

TITLE: Preparation of 9-azabicyclo[3.3.1]non-6-ene-6-carboxylic acid derivatives with an oxygen or sulfur heteroatom at the 3-position as renin inhibitors

INVENTOR(S): Bezencon, Oliver; Bur, Daniel; Fischli, Walter;

Remen,

Lubos, Richard; Bildstein, Sylvia; Weller, Thomas;

Sifferlen, Thierry

PATENT ASSIGNEE(S): Actelion Pharmaceuticals Ltd., Switz.

SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXKD2

DOCUMENT TYPE: Patent

LANGUAGE: English

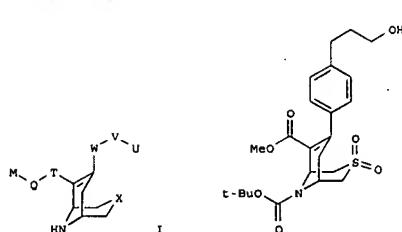
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004096366	A1	20041111	WO 2004-EP4371	20040426
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MO, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZN, RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CP, CG, CI, CM, GA, GN, GQ, GM, MD, MR, NE, SN, TD, TG				
AU 2004233575	A1	20041111	AU 2004-233575	20040426
CA 2521928	A1	20041111	CA 2004-2521928	20040426
EP 1622695	A1	20060208	EP 2004-729430	20040426
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, ES, HU, PL, SK				
BR 20040009884	A	20060523	BR 2004-9884	20040426
CN 1780663	A	20060531	CN 2004-80011537	20040426
JP 2006524655	T	20061102	JP 2006-505260	20040426
NO 2005004974	A	20051128	NO 2005-4974	20051026
US 2006258648	A1	20061116	US 2005-554702	20051027
PRIORITY APPLN. INFO.:			WO 2003-EP4371	A 20030430
			WO 2003-EP304492	A 20030430
			WO 2003-EP344924	A 20030430
			WO 2004-EP4371	W 20040426

OTHER SOURCE(S): MARPAT 141:410817  
GI

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



AB The authors prepared the title compds. I [X = O, S, SO<sub>2</sub>; W = 6-membered non-benzofused Ph, heteroaryl substituted by V in meta or para position; V = (CH<sub>2</sub>)<sub>r</sub>, A(CH<sub>2</sub>)<sub>r</sub>, (CH<sub>2</sub>)<sub>3</sub>CH<sub>2</sub>, OCH<sub>2</sub>CH(OMe)CH<sub>2</sub>O, etc., r = 3-6, V = 2-4, A, B = independently O, S, SO<sub>2</sub>; U = (hetero)aryl; T = CONR<sub>1</sub>, (CH<sub>2</sub>)<sub>p</sub>COO, (CH<sub>2</sub>)<sub>p</sub>NR<sub>1</sub>CO, (CH<sub>2</sub>)<sub>p</sub>NR<sub>1</sub>SO<sub>2</sub>, CO<sub>2</sub>, R<sub>1</sub> = H, (cyclo)alkyl, alkenyl, alkynyl, aryl, p = 1-4; O = alkylene, alkenylene; M = H, cycloalkyl, (hetero)aryl, heterocyclic] to be used in treatment or prophylaxis of various disorders and diseases associated with the renin-angiotensin system. For example,

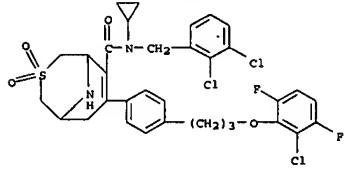
I [X = SO<sub>2</sub>, T = CONR<sub>1</sub>, R<sub>1</sub> = cyclopropyl, O = CH<sub>2</sub>, M = 1,3-C<sub>2</sub>GH<sub>3</sub>, WV = 4-C<sub>6</sub>H<sub>4</sub>(CH<sub>2</sub>)<sub>2</sub>O, U = 2-Cl-3,6-F<sub>2</sub>C<sub>6</sub>H<sub>3</sub>] was prepared from dicarboxylic acid (II) via addition of 2-chloro-3,6-difluorophenol followed by hydrolysis of the Me ester, amidation with cyclopropyl(2,3-dichlorobenzyl)amine, and removal of the BOC group.

IT 790697-22-2 P 790697-23-3P 790697-24-4P  
790697-25-5P 790697-26-6P 790697-27-7P  
RL PAc (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of azabicyclononene carboxylic acid cyclopropyl ester derivs. for treatment or prophylaxis of disorders and diseases associated with the renin-angiotensin system)

RN 790697-22-2 CAPLUS

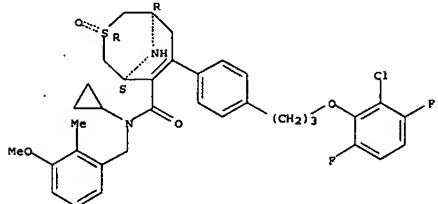
CN 3-Thia-9-azabicyclo[3.3.1]non-6-ene-6-carboxamide, 7-[4-(3-(2-chloro-3,6-difluorophenoxy)propyl)phenyl]-N-cyclopropyl-N-[(3-methoxy-2-methylphenyl)methyl]-, 3-oxide, (1R,3R,5S)-rel- (9CI) (CA INDEX NAME)

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 790697-23-3 CAPLUS  
CN 3-Thia-9-azabicyclo[3.3.1]non-6-ene-6-carboxamide, 7-[4-(3-(2-chloro-3,6-difluorophenoxy)propyl)phenyl]-N-cyclopropyl-N-[(3-methoxy-2-methyl-4-pyridinyl)methyl]-, 3-oxide, (1R,3R,5S)-rel- (9CI) (CA INDEX NAME)

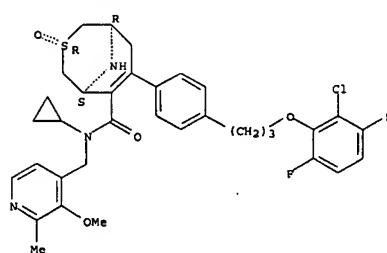
Relative stereochemistry.



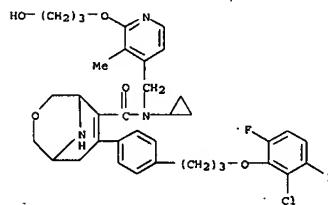
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CN 3-Thia-9-azabicyclo[3.3.1]non-6-ene-6-carboxamide, 7-[4-(3-(2-chloro-3,6-difluorophenoxy)propyl)phenyl]-N-cyclopropyl-N-[(3-methoxy-2-methyl-4-pyridinyl)methyl]-, 3-oxide, (1R,3R,5S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

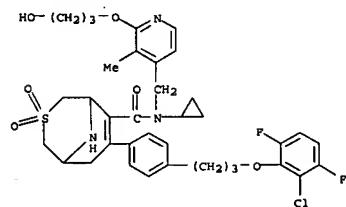


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CN 3-Thia-9-azabicyclo[3.3.1]non-6-ene-6-carboxamide, 7-[4-(3-(2-chloro-3,6-difluorophenoxy)propyl)phenyl]-N-cyclopropyl-N-[(2-(3-hydroxypropoxy)-3-methyl-4-pyridinyl)methyl]- (9CI) (CA INDEX NAME)

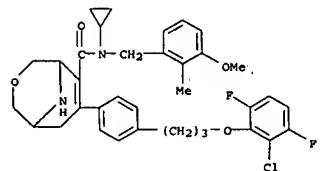


RN 790697-26-6 CAPLUS  
CN 3-Thia-9-azabicyclo[3.3.1]non-6-ene-6-carboxamide, 7-[4-(3-(2-chloro-3,6-difluorophenoxy)propyl)phenyl]-N-cyclopropyl-N-[(2-(3-hydroxypropoxy)-3-methyl-4-pyridinyl)methyl]-, 3,3-dioxide (9CI) (CA INDEX NAME)

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 790697-27-7 CAPLUS  
 CN 3-Oxa-9-azabicyclo[3.3.1]non-6-ene-6-carboxamide, 7-[4-[3-(2-chloro-3,6-difluorophenoxy)propyl]phenyl]-N-cyclopropyl-N-[(3-methoxy-2-methylphenyl)methyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

## PALM INTRANET

## Inventor Information for 10/554702

Inventor Name	City	State/Country
BEZENCON, OLIVIER	RIEHEN	SWITZERLAND
BUR, DANIEL	ALLSCHWIL	SWITZERLAND
FISCHLI, WALTER	ALLSCHWIL	SWITZERLAND
REMEN, LUBOS	ALLSCHWIL	SWITZERLAND
RICHARD-BILDSTEIN, SYLVIA	DIETWILLER	FRANCE
WELLER, THOMAS	BINNINGEN	SWITZERLAND
SIFFERLEN, THIERRY	GUEWENHEIM	GERMANY

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